

We Claim:

1 1. A centrifugal cutting apparatus that includes:
2 a stationary support member;
3 a tubular hub that is stationarily mounted in the support member with a
4 section of the hub extending outwardly from said support member;
5 a face plate that is rotatably mounted on the extended section of the hub so
6 that the face plate turns about the hub axis;
7 a plurality of blade holders each of which is secured to a shaft that is
8 journalled for rotation in an end face of said face plate, the shaft centers being
9 spaced an equal radial distance from the axis of said hub;
10 a blade having a cutting edge mounted in each holder so that the cutting edge
11 faces the axis of said hub;
12 drive means for rotating said face plate at a given speed and direction such
13 that the blade holders are moved from a home position inwardly toward the axis of
14 said hub by centrifugal force to bring the cutting edges of said blades into cutting
15 contact with a work element located between said blade along the axis of said hub;
16 and
17 gear means for connecting the support shafts of said blade holders to
18 coordinate the motion of said blade holders so that the blade holders move inwardly
19 at the same rate when the face plate is rotated at said given speed and direction.

1 2. The apparatus of claim 1 wherein said gear means further includes a
2 sun gear that is rotatably supported upon said hub adjacent to said one end face of
3 said face plate and a planet gear secured to each blade holder shaft so that said planet
4 gears mesh with said sun gear.

1 3. The apparatus of claim 2 wherein each blade holder includes a stop
2 block secured to said one end face of said head for locating the blade holder in a
3 home position and spring means for biasing said blade holder into said home
4 position.

1 4. The apparatus of claim 3 that further includes adjustable means for
2 limiting the amount of inward movement of each blade holder.

1 5. The apparatus of claim 2 wherein each shaft passes through an
2 opposite end face of said face plate and a counter weight being secured to the shaft
3 adjacent to said opposite end face.

1 6. The apparatus of claim 1 wherein said drive means includes a drive
2 pulley that is secured to the output shaft of a multiple speed drive motor and an
3 endless drive belt that is trained around the drive pulley and the face plate.

1 7. The apparatus of claim 6 that further includes a control means for
2 regulating the speed of the said drive motor.

1 8. The apparatus of claim 1 that further includes an indexing means for
2 advancing a work piece through said hub to position the work element between said
3 blades.

1 9. The apparatus of claim 8 that further includes a removable bushing
2 contained within said hub for guiding said work element along the axis of the hub
3 between said blades.

1 10. The apparatus of claim 9 wherein the bushing has an inside diameter
2 that forms a close running fit with the work element.